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This issue of *Our Planet* has been made possible by the generosity of the United Nations Foundation/Better World Fund.

UNEP

From the desk of

KLAUS TOEPFER

United Nations
Under-Secretary-General
and Executive Director,
UNEP

This edition of *Our Planet* celebrates women, and underlines their unique vulnerability to environment-related health problems, from water and sanitation issues to ones of indoor air pollution.

The special role that women play in the lives of their communities is highlighted in the new UNEP book *Women and the Environment*, which underlines how they are the unsung heroes of conservation, often outpacing men in their knowledge, and nurturing, of domestic and wild plants and animals. Largely thanks to them many species, some with important drought or pest resistant properties, survive and remain in cultivation.

Intimate understanding

Women, especially in developing countries, are the farmers, feeders and carers in their communities, relying on an intimate understanding of nature. They are also the primary providers of water. In the mountain areas of East Africa, they may expend close to a third of their calorie intake collecting and supplying it.

They often bear the brunt of a natural disaster, such as famine or drought, and shoulder the responsibility for keeping offspring alive. In pastoral societies, men migrate to new pastures when cattle die, or move away to pursue other activities. Women and children may also leave, but generally as a group to hunt famine foods, pods and other tree products to sell in distant markets, says the book. It is published in association with the Women's Environment and Development Organization (WEDO) – with financial support from the United Nations Foundation, whose sister body the Better World Fund has generously sponsored this issue of *Our Planet*.

Front line

Women are often in the front line in terms of overcoming poverty, managing land and waterways, and sustaining communities. During times of stress and insecurity, they must forage further and further for food, water and fuel. During times of plenty, the fields and kitchen gardens they tend are mini-laboratories where domesticated and wild plants and animals are selected and tested for their agricultural and medicinal value.

Studies of 60 kitchen gardens managed by women in Thailand chronicled 230 different vegetable and other species, many rescued from a neighbouring forest before it was cleared. Village women in the Kanak Valley in the Province of Baluchistan, Pakistan, can readily identify 35 medicinal plants they commonly use. They say that the plants 'grow up with no masters' – meaning that they have no husbands to boss them around.

Traditional knowledge

A study in Sierra Leone found that women could name 31 uses of trees on fallow land and in forests while men could only name eight. Here, men's traditional knowledge is declining with formal schooling and emigration whereas women are retaining theirs – and often acquiring the men's.

In Yazd, the 'desert capital' of Iran, it is women who have devised novel agricultural methods including producing food in underground tunnels. In southeast Mexico, women keep as many as nine breeds of local hens – as well as ducks and turkeys – in their back gardens, selecting the best to suit local environmental conditions. Thus they are actively conserving genetic diversity and contributing to conservation.

Desertification afflicts up to half of China's population. In a dry and degraded area 1,000 kilometres west of Beijing women have mobilized communities to plant willows and poplars to halt the deserts and create fertile land for vegetable production.

The role of women and their 'know-how' is often undervalued and ignored. All too often they are treated as second-class citizens with fewer rights and lower status than men. It is high time that national and international policies reflected gender differences and gave far greater weight to the empowerment of women.

Gender dimensions

So we must breathe life into the gender dimensions enshrined in the United Nations Millennium Development Goals. We must build on the outcomes of the 1992 United Nations Conference on Environment and Development, the 1994 International Conference on Population and Development (ICPD), the 1995 World Conference on Women and the 2002 World Summit on Sustainable Development, and cement them at this tenth anniversary of ICPD.

For if we ignore the role of women, all our hopes and aspirations for a better and more stable world will be harder to achieve ■

YOUR VIEWS

We would really like to receive your feedback on the issues raised in this edition of ***Our Planet****. Please either e-mail feedback@ourplanet.com or write to:*
Feedback, Our Planet
27 Devonshire Road
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United Kingdom

MILES TO GO
before we relax

THORAYA AHMED OBAID assesses progress over ten years of action on poverty reduction and development, and sets out priorities for the decade ahead.

A

This is my first message for our collective work for the next ten years of the Cairo Programme, to 2015.

I have five more.

That is my second message.

Economic growth

This is my third message for the next decade.

We cannot reduce poverty, hunger and disease, especially HIV/AIDS, unless we make greater investments in education and health, including reproductive health

This is my fourth message.

Strategic interventions

That is my fifth message.

This is my sixth message at this mid-point of Cairo's 20-year programme.

■

Practical consensus

NAFIS SADIK

describes progress and setbacks since the International Conference on Population and Development in Cairo ten years ago

The great achievement of the International Conference on Population and Development (ICPD) in 1994 was to reconcile development policy makers, the women's movement and demographers. The Cairo consensus recognized that demographic outcomes cannot be dictated. Women and men have the right to choose their own future and, when they do, everyone is better off.

If women can choose the size and spacing of their families, they have fewer children than their mothers did. Families are smaller and population growth is slower. We are already seeing the results. Families are half the size they were in 1960. Countries like Mexico, the Republic of Korea and Thailand have seen plummeting fertility and rocketing economic growth. And women – able to make choices in one area, fertility – are beginning to assert themselves in others, such as in improving education and ending gender violence.

The Cairo conference gave a huge boost to this process. The consensus enunciated the right to reproductive health as part of people's right to health. This is especially important for women and girls, who are uniquely vulnerable in all societies, for a variety of reasons. The Cairo consensus says that health and education systems must recognize this, and give girls and women the strength, the information, the services and above all the confidence they need to navigate their way through life. The goal of the Cairo Programme of Action is that reproductive health care should be available to all who need it by 2015.

Shocking statistic

One woman dies every minute as a consequence of pregnancy – almost all of them in developing countries. This shocking statistic is the result of inadequate health systems, but it also stems from ignorance and neglect of women's needs. One of the Cairo goals – now one of the Millennium Development Goals – is to reduce this toll by three quarters by 2015.

The Cairo consensus recognized that gender violence in all its aspects is a threat to reproductive health. Gender violence comes from one single source – the subjection and oppression of women. Female and female genital cutting, honour killings and violence in the home will end if men accept women as equals – with

equal rights to education and health, reproductive health first and foremost; with choices in marriage and childbearing; and with the right to involve themselves in the economy and the wider society.

Women's empowerment and gender equality are absolutely vital if countries are to confront and defeat the HIV/AIDS pandemic. Countries where infection rates are rising – including most countries in Asia-Pacific and Africa, and many in Latin America and Europe – can learn many lessons from the most seriously affected countries in Africa; but the most important one is to support and empower women. If women could make their own choices and decisions about sexual contact they could stop the pandemic in its tracks. And men who support and empower women are vital partners.

Universal goal

Half of all new HIV infections are among young people. The overwhelming majority are infected through sexual contact. Some extremists pretend that young people will be safer if they are ignorant about sex: but the evidence is all the other way, in favour of trusting young people with the information and the means to protect their lives and health. The Programme of Action states that young people should have the information and services they need, as they prepare for adult responsibilities. That should be the universal goal.

The great virtue of the Cairo consensus is that it is practical. It emerged from countries' own experiences – and ten years of implementing the Programme of Action has only confirmed its relevance. In the last 12 months, regional conferences in Asia and Latin America have resisted extremist pressure and confirmed their commitment to the consensus. The Cairo Programme of Action is the road map to gender equality, better reproductive health and balanced population growth in the 21st century ■

Dr Nafis Sadik is Special Envoy of the UN Secretary-General for HIV/AIDS in Asia and was formerly Executive Director of UNFPA and Secretary-General of the 1994 International Conference on Population and Development. She is a board member of the United Nations Foundation.

POWER *SHIFT*

LENA SOMMESTAD and **REJOICE MABUDAFHASI** describe how empowering women is vital for improving health and the environment through the provision of adequate water and sanitation

Water is essential for all life. But even though it is precious to us, we do not always treat it as a precious resource. It is usually used and managed in a fragmented and unsustainable way: water scarcity and degradation frequently result. Our way of living has created a situation where freshwater resources are under tremendous pressure and more than 1 billion people lack acceptable water to drink.

Changing this situation, and creating a sustainable future for everyone, is a demanding and crucial task for us all. It is our responsibility – as politicians, water experts, representatives of public and private sectors, and citizens – to make concentrated efforts to reach the Millennium Declaration Goals related to water, the targets set in the Plan of Implementation from the World Summit on Sustainable Development in Johannesburg and other internationally agreed targets on water.

Water issues played an important role at the World Summit in Johannesburg two years ago. An ambitious target was set: to halve the proportion of people without access to clean drinking water and basic sanitation by the year 2015. Another was set to develop national integrated water resources management and water efficiency plans by 2005.

We recognize water as a key factor for economic growth. Enhanced water and sanitation services represent a fundamental step towards improved livelihoods for poor people. A paradigm shift is needed towards sustainable sanitation systems if we are to achieve the Millennium Development Goals and the Johannesburg commitments on sanitation.

Holistic alternative

Ecological sanitation provides one such alternative. Based on an ecosystem approach, and not a specific technology, it offers a conceptual shift in the relationship between people and the environment. Ecological sanitation is holistic: it saves water, prevents water pollution, and sanitizes and recycles nutrients and organics to restore soil and soil fertility – and often at a much lower cost than conventional sanitation. Besides providing a basic service, it can contribute to improved health and food security and income-generating activities, especially if combined with rainwater harvesting.

Ecological sanitation cannot be scaled up unless it is socially and culturally acceptable. The needs and priorities of the people themselves must always be in focus in all water and sanitation interventions. The users should play a leading role in putting their ideas into practice. Involving households and communities in planning, implementing and maintaining services and the use of suitable technology is most important for achieving success, as are long-term ecological and financial sustainability.

It is important to acknowledge the gender dimension in such projects. There is no reason why women should not have the same benefits and opportunities as men. It is also vital that changes in roles and responsibilities do not mean that women have to take on additional duties and workload.

Indeed, there is an urgent need further to mainstream a gender perspective in all water resource management, not just in water supply and sanitation projects. This implies giving adequate consideration to both women's and men's roles, needs, access, responsibility, and control of land and water rights. Poor women and men, in particular, depend on the ecosystems of wetlands, coastal zones, etc., for their livelihoods. But women and men have different interests and needs in relation to different water and sanitation issues. In order to succeed, all these aspects must be taken into account.

Main responsibility

Women worldwide are directly affected by poverty and directly involved in the day-to-day work of putting food on the table and ensuring there is fresh water to drink. In many parts of the globe, they find themselves dividing their time between domestic duties, cultural activities and community projects. In some places, cultural norms restrict them from asserting themselves or taking the lead in development processes and programmes.

Women are generally the most affected by investments in sanitation since they often tend to take the main responsibility for domestic activities. The importance of involving them in decision making and in implementing development programmes – particularly in the areas of water, sanitation and human settlement – is now widely recognized. Crucially, it is easier to involve women in ecological sanitation projects as they place less emphasis on high technology solutions. The challenge, however, remains to define effective interventions that will enable and empower women to play a more direct role in development processes and decisions. ▸

Pooja Thakur/UNEP/Topham

Equally EFFECTIVE

MARY ROBINSON explains that gender equality must be the core of any successful approach to combating HIV/AIDS

In the immediate aftermath of this summer's International AIDS Conference in Bangkok, where we emphasized the central role of leadership in tackling HIV/AIDS, I believe the real challenge is to make AIDS a priority issue of the women's movement worldwide.

We need women leaders at every level, from grassroots to head of government, from business to trade unions, from faith to academia, to unite around the seven action areas of the Global Coalition on Women and AIDS which call for:

- preventing HIV infection in adolescent girls, focusing on better reproductive health care
- reducing violence against women
- protecting property and inheritance rights of women and girls
- ensuring equal access to care, treatment and support
- supporting improved community-based care, focusing on women and girls
- promoting access to prevention options for women, including female condoms and microbicides
- supporting ongoing efforts towards universal education for girls.

HIV/AIDS is one of the most serious human rights issues of this century, and must be tackled with human rights values and a gender-sensitive approach. Those living with it know the extent of the discrimination. I heard it from so many of them during my term as United Nations High Commissioner for Human Rights and since, including from women in rural areas in Africa who feared losing their homes and being rejected by their families. I heard it over and over again from women living with AIDS during the Bangkok conference.

Human rights response

We know that placing human rights at the centre of the response to AIDS is an effective strategy. Non-discrimination, legal protection and equal access to services are critical. Constitutional and national protection of the rights of those infected and affected by HIV/AIDS is still lacking in most countries. States have a particular responsibility to meet their human rights commitments, and they have the mechanisms to do so.

For a long time most countries have recognized that it is wrong to discriminate on the basis of gender, race or religious beliefs. Over time we have realized that it is also wrong to discriminate on the basis of physical ability or sexual orientation. It may now be time to realize that discrimination based on health or serostatus also has no place in our societies.

Gender equality is at the core of a human rights approach to

Philip Wolmuth/UNEP Tsunami

HIV/AIDS, and forms the basis of our work in the project I now head, Realizing Rights: The Ethical Globalization Initiative. We must have a gendered response, sensitive to the needs and multiple vulnerabilities of women while recognizing and strengthening their own agency.

When women lack social and economic power, their ability to negotiate relationships is compromised. While more injecting drug users are male, female drug users remain marginalized and unlikely to access services. Women are at higher risk of sexual transmission, which can occur with a drug-using partner.

Women make up an increasing proportion of those newly infected with HIV. Violence against them fuels the epidemic and enables their exploitation, including trafficking and prostitution. Minority women, refugees and migrants are particularly at risk.

Mother-to-child transmission must be addressed, but the well-being of women in their own right must also be protected through anti-retroviral treatment provision to adults. It is a human rights imperative that prevention information, confidential counselling and testing, treatment for sexually transmitted diseases, and comprehensive drug and anti-retroviral treatment be available to men and women equally.

Brave actions

We know what works. We need to adopt comprehensive programmes, rather than piecemeal prevention projects. We need outspoken leaders and brave actions. We need insightful, accurate and sensitive media awareness campaigns, in every medium and every language.

We need data disaggregated by both age and gender to address this epidemic adequately, and prevention interventions targeted in a gender-aware and youth-friendly way. We must have effective treatment of sexually transmitted infections, available in contexts that are appropriate for men, women and young people.

We need confidential sexual and reproductive health information and services – including testing and counselling. We need many and well-run needle exchanges, needle availability, drug treatment programmes and outreach by and to injecting drug users. Effective strategies for young people include peer-led programmes, school interventions and adolescent-friendly health services.

HIV/AIDS is one of the most serious human rights issues of this century, and must be tackled with human rights values and a gender-sensitive approach

We must work together to form effective partnerships – within nations between government, civil society, private sector and academic participants, and between nations regionally and globally. We need structural interventions and long-term, sustainable investment and development to tackle the structural factors that fuel HIV/AIDS risk behaviours, such as unemployment, poverty, gender inequality, drug use, prostitution and violence.

Action on prevention now will save millions of lives and billions in investment later. Effective prevention rarely makes headlines. It is not easy to engage people on what doesn't happen, on the lives saved, the people who do not get sick, the families and societies that are not destroyed by AIDS, because effective HIV prevention was implemented in time.

Yet aiming for these absences is exactly what we must do to meet the Millennium Development Goal to have halted and begun to reverse the spread of HIV/AIDS by 2015. Eleven years from now, I hope we will read only this type of news, and reflect on the catastrophe that our actions successfully prevented. ■

Mary Robinson, formerly President of Ireland and United Nations High Commissioner for Human Rights is Executive Director of Realizing Rights: The Ethical Globalization Initiative.

PEOPLE

Blue Planet Prize

Dr Susan Solomon

Blue Planet Prize

Dr Gro Harlem Brundtland

Atmospheric scientist **Dr Susan Solomon** and former **Norwegian Prime Minister Dr Gro Harlem Brundtland** have been awarded the **2004 Blue Planet Prize,** given each year to people who 'make outstanding achievements in scientific research and its application, and in so doing help to solve global environmental problems'. The prize, 50 million yen to each recipient, is sponsored by the **Asahi Glass Foundation,** chaired by **Hiromichi Seya.**

Dr Solomon was the leading scientist and has been given the prize for 'pioneering work' in identifying the mechanism through which chlorine compounds from CFCs coupled with the extremely low temperatures of Antarctica to create the Antarctic ozone hole. Her finding provided one of the scientific cornerstones of the process that led to the accelerating phase-out of CFCs through the **Montreal Protocol.** She says: 'I have had the great fortune to learn that science is not a one-man or one-woman game: it's a team endeavour of sometimes epic meaning.'

Dr Brundtland – the first former environment minister to head a government, and a member of the board of the **UN Foundation** – won her award for 'putting forward globally the innovative concept of sustainable development', notably through her chairing of the **World Commission on Environment and Development** in the 1980s. She is also cited for her later work as **Director-General of the World Health Organization** and recalls how 'as a young doctor, I became aware of the public health significance of a safe and secure environment'.

The awards ceremony will be held on 10 November in Tokyo and the following day the recipients will give commemorative lectures at the United Nations University in the city ■

The Olympic flame began its global journey from Olympia in March, travelling through Africa and Latin America for the first time ever. After a journey of 78,000 kilometres involving 3,600 torchbearers, it arrived back in Athens for the Olympic Games in August.

On 24 June 2004, the flame passed through Geneva and ***Nicole Meyer, UNEP Youth Advisor,*** *carried it on behalf of UNEP* ■

UNEP/edupresse.ch

Film star and heartthrob **Jake Gyllenhaal** was so impressed by what he learned during his starring role in **Roland Emmerich's** global warming blockbuster **The Day After Tomorrow** that he has become an environmental activist. 'I decided I had to get involved with something,' he says. 'Something that would help the environmental cause. I'd much rather talk about the environment than some gigantic action movie. Global warming is a hugely important issue.'

Gyllenhaal – who is joined in his environmental concern by his friend actress **Kirsten Dunst** – has decided to help **Future Forests,** which encourages people to offset their carbon emissions by paying to plant trees or buy energy-saving light bulbs. He has chosen to support a forest in Mozambique and talks enthusiastically of how he has 'bought mango trees, fruit trees, nut trees'. He adds: 'They also give jobs and food. People can get an income from them, which is important for sustainable development' ■

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Popeye, *the cartoon character, may have found the secret to making solar cells take off. Scientists at the* ***Massachusetts Institute of Technology,*** *led by* ***Professor Marc Dando,*** *have discovered that spinach – which gave the sailorman his energy – could be the missing ingredient towards getting cheap electricity from the sun, through harnessing the power of photosynthesis. He says that conventional solar cells, made from silicon, had not provided the breakthrough needed 'to change the energy market' but that his team hoped to do so by 'taking advantage of 2 billion years of evolution by plants in developing how best to use the power of the sun'* ■

Samuel J. Salkin has been appointed Executive Director of the **Richard and Rhoda Goldman Fund** and of the **Goldman Environmental Prize.** He has held senior management positions in the fields of retail, wholesale distribution, technology and banking and was most recently Chief Executive Officer of the **Jewish Community Federation of San Francisco,** northern California's largest public charity ■

Pedro O Domingues/UNFPA/Topham

Peace of mind, piece of land

NOELEEN HEYZER describes the impact of AIDS on women and girls and calls for specific measures to give them access to land and water

When the devastation of AIDS enters a household, it is the women who take on the burden of added responsibilities. In hard-hit communities all over the globe, women are caring for sick and dying family members around the clock, while trying to fulfil their regular household responsibilities, such as child care, household maintenance and food preparation. In sub-Saharan Africa, where the epidemic has hit with terrible ferocity, women not only prepare the food, they also grow it. When women farmers are pulled out of production, many households are pushed to the brink of starvation.

Women's ability to shoulder these extra tasks falters most dramatically when it comes to the three life sustaining essentials: water, food and land. It is not uncommon for women in rural areas to spend a good part of their day collecting water, entailing hours of walking. A rural woman interviewed in southern Africa told UNIFEM it took 24 buckets of water to care for a full-blown AIDS patient every day. This is not hard to fathom: because of severe diarrhoea patients must be washed – and clothes and bedding laundered – five, six or more times a day.

Deadly scenario

As women's days are spent fetching water, preparing food and cleaning patients, there is less time to perform the tasks that sustain life, such as cultivating crops or earning a small income. A study in South Africa, for instance, showed that in almost half the households surveyed the primary care-giver for an AIDS patient had taken time off from formal or informal employment, or from schooling. Women and girls may lose as much as 60 per cent of time from other housework or cultivation tasks, affecting the ability of poor households to grow food for consumption or sale.

To make things worse, the widows of men who have already died from the disease no longer have land to grow the food that will keep them alive, because in many places single and widowed women are denied the right to own land and property in their own name. When combined with poverty and gender inequality, HIV/AIDS creates a deadly scenario for women and their families.

Even when family members are in hospital, women must often provide care and food, because of inadequate and under-resourced public health programmes. When a UNIFEM NGO partner in Tanzania was asked how she convinces policy makers that women's labour cannot continue to be taken for granted she explained that she tells them: 'Sit outside Muhimbili Hospital [in Dar Es Salaam] for one day and watch the women go in and out, in and out, bearing food and clean clothes, taking their caring responsibilities right into the hospital.' She asks them to think about what this means for each woman who must leave work at home to travel to and from the hospital and provide many hours of care each day.

If women themselves are sick from AIDS-related illnesses – as they are in ever-increasing numbers – how much harder is it to cope with the additional care-giving responsibilities that AIDS places upon them? Where is the time to take even a part-time job, or buy and sell goods in the marketplace? Where is the possibility for the children, particularly girls, to go to school when needed to help in the home? What possibilities are there for young women and girls to compensate for the increased poverty that AIDS brings?

The impact on the household of women's increased care-giving burden has broad implications, and must ultimately be dealt with at the policy ▸

Peter Wood/UNEP/Topham

Bukola Wolenge/UNEP/Topham

UNEP/Topham

level. Governments must urgently provide adequately staffed hospital wards or clinics to care for AIDS patients and take legislative and other measures to address women's need for access to land, food and water.

There have been some encouraging steps. Several countries, for example, have passed laws or simply encouraged communities to support women's rights to own land and other property. When refugees and displaced people began to return home at the end of the 1994 genocide in Rwanda, widows and unmarried women faced a crisis: without husbands or fathers they had no access to land. Women's organizations began to advocate changes in the law. UNIFEM supported the Forum of Women Parliamentarians, helping it create a Parliamentary Gender Desk that paved the way for gender-sensitive legislation. In 2001, following an intensive lobbying campaign, the Parliament adopted a new inheritance and succession law guaranteeing women and girls the right to inherit land and property.

Claiming rights

Such laws are a necessary starting point – but not all that is needed, as can be seen in Zimbabwe. Although Zimbabwe has passed a law allowing women to own land, the practice of deferring to custom in matters of land and property means it is rarely enforced. The UNIFEM Trust Fund to End Violence Against Women – by supporting the Network of Zimbabwean Positive Women – helped Nyaradzo Makambanga claim her right to land. When she became ill from AIDS-related diseases in 1998 she was sent away by her husband who refused to support her. All of the land was in his name. 'I was shattered. My hopes and dreams had come to an end,' she says. 'I thought I was going to die and leave my children.'

With the help of the Network she learned about the laws and practices governing women's right to own land, as well as how to work around them. With new-found confidence she approached her village chief who agreed to assign her a plot of land to cultivate. She was able to purchase seeds through the Network's revolving fund and her new life began. She later took on the role of advising women in similar predicaments. 'I would not want to see other women go through the difficulties I went through because of ignorance,' she says. 'If I had known that I had my own rights, even though I was married, I would not have ended up being HIV-positive. What women need is peace of mind and a piece of land to cultivate and be equal to men.'

Poverty and gender discrimination have turned a devastating disease into a social and economic crisis

But land rights are only one part of the policy and legislative changes that are needed. Water, which is critical, is in increasingly short supply in many countries: even more alarming, it is increasingly subject to privatization. As access to water becomes more and more difficult, women will have to spend even more time trying to collect it.

Beyond this, funding to reverse the spread of HIV/AIDS must be specifically targeted to women. Poverty and gender discrimination have turned a devastating disease into a social and economic crisis. Ending the crisis requires the infusion of serious resources into programmes that promote gender equality and women's empowerment, programmes that are grounded in the knowledge and experience of women living and working in communities.

If we lose this moment, the future will be bleak for the vast majority of women in developing countries who are increasingly both affected and infected by HIV/AIDS. If we act as we can and must, the year 2015 could mark the taking of great strides towards achieving the Millennium Development Goals of eradicating poverty and HIV/AIDS and supporting gender equality. And we will be able to take pride in helping to realize Nyaradzo Makambanga's wish for women the world over: peace of mind, a piece of land and equality with men ■

Noeleen Heyzer is Executive Director, UNIFEM.

The young *ones*

KATHRYN BUSHKIN

explains the importance of adolescent girls to our global future, and describes a programme that is giving them hope and skills for life

The future of the world will be determined by today's young people. They represent our best hopes and therefore we must nurture, care for and educate them. They are also barometers of our greatest challenges: their fears and vulnerabilities related to the environment, AIDS, poverty and opportunity illuminate global priorities. These values and responsibilities made young people, especially adolescent girls and their needs, central to the Programme of Action developed at the International Conference on Population and Development (ICPD) ten years ago.

Almost half of the nearly 6.4 billion people in the world are under the age of 25. There are now more than 1 billion young people on the planet, including more than 750 million teenagers just entering their reproductive years. The large cadre of young people around the world ensures that, even as fertility rates continue to decline globally, there will be significant population growth in the decades to come. This phenomenon, known as 'population momentum', will account for 50 per cent of population growth in developing nations through 2100. Clearly, the choices and opportunities provided to, and the decisions made by, the emerging generation will shape the world of the future. Central to this equation are adolescent girls, who face significant social, economic, biological and political challenges.

Focus on youth

Since its founding by far-sighted businessman Ted Turner in 1998, the United Nations Foundation has had a special focus on youth generally (through children's health programmes), and especially on adolescent girls (through our women and population programme). The rationale for UNF's focus on adolescent girls is compelling.

In just about every corner of the world, adolescent girls face unique pressures – regarding sexuality, marriage, economic opportunity, education and violence. For a variety of reasons, adolescent girls, married and unmarried alike, have limited ability to protect themselves against unwanted, unsafe sexual encounters, as well as against unwanted and child marriage, pregnancy and disease.

Socio-economically, girls continue to have limited access to quality basic education in many parts of the world and this, in turn, limits opportunities for meaningful roles in their communities. Girls' income-generating skills and professional opportunities are also constrained. They carry a disproportionate domestic work burden, and are denied leadership opportunities and active participation in community affairs. These many deficits, which ultimately stem from their low status in society, reinforce each other, compromising adolescent girls' ability to fulfil their potential.

More recently, the HIV/AIDS pandemic has emerged as a major threat to the well-being of young women, particularly in sub-Saharan Africa, where three quarters of all female cases of AIDS can be found. Women now constitute almost 60 per cent of all infections in sub-Saharan Africa: more than 15 million women and girls are affected. In much of southern African, HIV prevalence is four to seven times higher among girls under the age of 18 than among boys of similar age, while 67 per cent of all HIV-positive young people are female.

Most vulnerable

For all these reasons, the United Nations Foundation has been working with the Joint United Nations Programme on HIV/AIDS (UNAIDS) on the Southern African Youth (SAY) initiative. SAY is aiming to prevent the spread of AIDS among young people in eight southern African countries, focusing on the most vulnerable populations, such as girls without access to education, street children, refugees and migrants.

The SAY initiative is bringing hope and developing models of success in southern African communities. Health education and life-skills education has reached more than 100,000 adolescents in Angola. Youth clubs for thousands of girls have been established in Malawi to enhance self-esteem. School-based counselling programmes have been used in 62 Mozambican schools. Scores of successful HIV/AIDS prevention strategies and services have been initiated in South Africa, Swaziland and Zimbabwe.

Working together, the United Nations Foundation and the UN agencies it supports in the field are developing success stories in the effort to help young people avoid HIV infection. In the process, we are promoting opportunities for our best hope for the future – healthy, happy, educated and informed citizens equipped with the skills and opportunities they need to build a better tomorrow ■

Kathryn Bushkin is Executive Vice President and Chief Operating Officer of the United Nations Foundation.

We are promoting opportunities for our best hope for the future – healthy, happy, educated and informed citizens

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UNDP/Topham

Fuelling CHANGE

MAMPHELA RAMPHELE describes how collecting and burning wood and biomass damages women's health and the environment, and how household electricity revolutionizes their lives

When we become ill, many of us will be treated by doctors with advanced technology. We will receive the latest drugs. If our doctors need to, they can research sophisticated databases, press a few buttons and consult anyone in the world. But as we all know, most of the world has no such access. Indeed, even in the richest countries, there are many who do not have access to adequate medical care. Access to critical medical services is socially determined.

We have become more aware of the intimate linkage between the environment and health outcomes. The breakdown of the water, sanitation and electricity infrastructure in Iraq – and the anticipated effects on the health of a predominantly urban population – are of serious concern. We have also recently been reminded of the importance of having strong public health infrastructure and core functions in place, through the effective, immediate response to severe acute respiratory syndrome (SARS) in Viet Nam, which limited the outbreak in that country through combined clinical and public health approaches.

Environmental risks disproportionately affect poor households, and it is poor children and women who are shouldering an unfair share of this burden. Acquiring and using biomass fuel and fodder for the household may take up anywhere between two and nine hours a day in developing countries, depending on their availability. In Lombok, southern Indonesia, women spend about three hours each day cooking, and four hours each week collecting dead wood or agricultural residues to be used as fuel. In some areas of Kenya, women spend seven hours a day on similar tasks.

Work's burden

In rural areas of India, there are wide differences in the work burden of men and women. Women are engaged for six hours daily in collection of fuelwood and fodder, and cooking: men spend approximately ten times less time on these tasks. In some areas, this extreme physical drudgery causes serious reproductive problems and mental disorders in women.

A 1996-1997 study carried ou Jashodhara Dasgupta of Sahayo research and activist group Uttranchal, western India – invo over 1,000 women in ten locat across 12 districts – found proportion of miscarriages to be 3(cent, five times higher than average rate reported in the Nat Family Health Survey of 1992-19 noted that women have a grue schedule during pregnancy – inclu lifting heavy loads of wood, ma and grass – which added to the ris miscarriage. The women of Uttran are also under continuous me stress from anxiety over how to sus the household. There is high r migration to urban areas, while pleted forests have made the tre gather fuelwood and fodder m longer and tougher.

Apart from the physical costs collection – and the effects this both on women's health and depletion of natural resources – u low-cost, widely available traditi energy sources such as coal biomass (wood, dung, crop resid for cooking and home heating res in a high incidence of respirat diseases and eye problems.

Half the world's population is posed to indoor air pollution, ma through the burning of solid fuels cooking and heating. Biomass is the main source of energy for 6(90 per cent of households in de oping countries – some 2.5 bil

Environmental risks disproportionately affect poor households

people. It is the mothers and their children, primarily in rural areas, who are mainly exposed to the effects of poor ventilation of biomass fuel while using primitive stoves, and who pay the price in illness and premature death. Much evidence has been documented, for example, that associates burning this fuel with the incidence of chronic bronchitis in women and of acute respiratory infections in children.

Significant benefits

In some high-mortality Latin American countries, such as Guatemala, it has been estimated that indoor smoke from solid fuels causes 10,000 deaths a year, with 298,000 years of life lost. In a programme there, improved stoves have had a significant impact on people's lives. Participants reported the most valued benefits – besides removing smoke from the house – were using less fuelwood, and reducing cooking time. Given the drudgery involved in collecting firewood and cooking, these are also significant benefits for rural women.

Policies for rural areas that encourage the uptake of petroleum fuels and efficient use of biomass fuels can effectively address the problems of indoor air pollution and women's physical labour. But women must be involved in planning these policies and interventions to ensure that they are implemented successfully and sustainably. Energy policies and projects by themselves will not change the plight of women in society, but they can be used as entry points for reducing a preventable burden of death and illness among women and in promoting greater fairness in allocating opportunities and resources between the sexes.

The effectiveness of addressing this life-threatening issue will depend on three key considerations:

- the policy and regulatory context
- making sure that all relevant sectors/perspectives are considered in interventions that aim to increase fuel efficiency, reduce health risks and improve local ecology
- local community involvement in technology design and application, especially with regard to stoves and ventilation.

Government programmes need to include a component to inform, educate and communicate the health, environmental, energy and financial consequences of indoor air pollution and the different interventions that reduce exposure. There are typically three types of these:

- improved cooking and heating devices or use of cleaner fuels
- improvements in the living environment such as better ventilation or separate cooking areas
- changes in behaviour to reduce exposure to smoke or to reduce smoke generation through, for example, proper stove maintenance and cleaning.

Long-term sustainable solutions require full participation from local government, civil society, the commercial sector and local communities, particularly women.

A rural energy market study, sponsored by the joint United Nations Development Programme/World Bank Energy Sector Management Assistance Program (ESMAP), uncovered promising results about the impact of electrifying households on the lives of women. A survey of 5,048 women from six states of India in 1996 revealed that access to electricity directly affects the amount of leisure time they have, while providing channels to increase their knowledge and awareness through facilitating reading and watching television. It also found that women from households using electricity are likely to spend less time collecting fuel and are more likely to use fuels that are less debilitating to their health.

Healthier lifestyles

On average, these women lead healthier and more productive lives than their counterparts in households that do not use electricity. Both reading and watching television, for example, can educate and enlarge the horizons of village women and, in the long run, bring about social change. Although empirical evidence needs to be strengthened, having electricity in rural households seems to change their overall environment in such a way as to encourage healthier lifestyles, including better cooking systems.

Electricity is available in almost all villages in India today. However, according to the ESMAP study, which surveyed six out of the 20 states of India, about 60 per cent of households do not have electricity from the grid. Based on a 2001 census of India, the statistic is as low as 40 per cent of the country with access to electricity.

As the Global Health Council emphasizes, the task facing us today is daunting. Each year, all around the world, tens of millions of human beings [illegible] needlessly, and hundreds of millions of lives are ruined as well as lost. The world has the resources to greatly reduce this loss and suffering. [illegible] to do so. [illegible] we must, only we ■

Agnieszka Bilska/CNRamphele

Dr Mamphela Ramphele is the retiring Managing Director of the World Bank and Senior Advisor to its President.

At a glance: Women, health and the environment

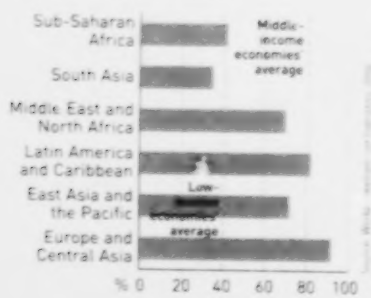
Women stand on the front line in the battle with environmental degradation. Their health depends on the health of the land, forests, air and water around them. As those in closest contact with the land and the natural world they are usually the first to suffer from its degradation.

Deforestation increases the amount of time women must spend in seeking both fuel and water: when the trees are felled water sources also dry up. In Gujarat, India, women now have to devote four or five hours a day to collecting fuelwood, whereas not long ago they only had to go out to get it every four or five days. Every day in South Africa alone, the country's women walk the equivalent of going to the moon and back 16 times over

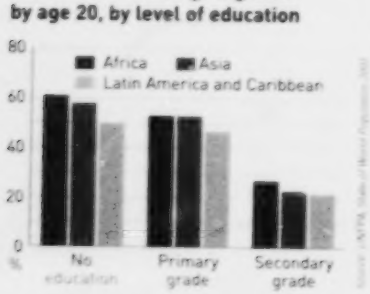
Maternal mortality by region, 1995

Sub-Saharan Africa
South Asia
Middle East and North Africa
Latin America and Caribbean
East Asia and the Pacific
CIS/CEE and Baltic States
CIS: Commonwealth of Independent States
CEE: Central and Eastern Europe
0 2 4 6 8 10 12
Hundred maternal deaths per 100,000 live births, 1995

Per cent of births attended by skilled health staff, 1995-2000



Per cent of women giving birth by age 20, by level of education



Illiteracy amongst women

Total fertility rate, 2000-2005

Increasing the education of girls and improving reproductive health services are essential elements in sound population policies. Bettering the lives of adolescent girls reduces their fertility, improves their – and their children's – health, and increases economic productivity. Girls who complete secondary school tend to give birth later, and have fewer children, than those who do not – so birth rates fall, maternal and child survival increases, and population growth slows. Yet girls remain disadvantaged in education; nearly two thirds of the 153 million illiterates aged 15-24 worldwide are women. Changing attitudes to childbearing, and improved access to family planning, have led to a sharp decline in family size over the last 35 years. The international consensus is that progress is grounded in human rights and development, concentrating on building the capacities of women to manage their own lives.

to fetch water for their families. Both tasks cripple the health of the women who have to carry the heavy loads.

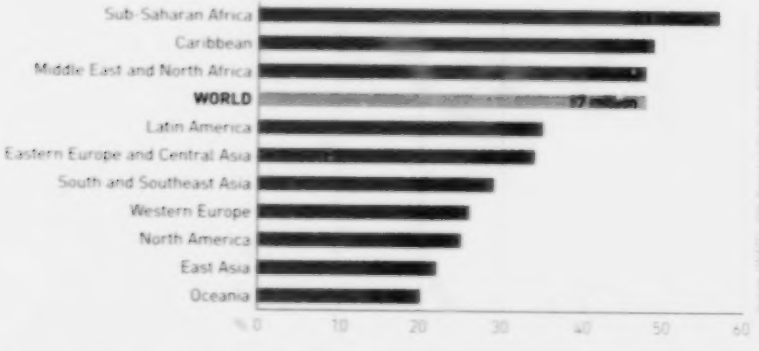
The water is often unsafe, killing more than 3 million people a year, mostly children. And pollution from the fuelwood and other biomass – which 2.5 billion people have to use because they lack modern forms of energy – disproportionately kills women and children, who spend most time in the home.

Women, who tend to carry more fat, are also more vulnerable to the toxic chemicals that build up in it, and so are their unborn babies. In countries as different as the United States and the Sudan increased neonatal deaths have been found among the children of women farmers exposed to pesticides. High levels of dioxins and other hazardous chemicals have been found in breast milk in a wide variety of countries, while women exposed to polychlorinated biphenyls (PCBs) around North America's Great Lakes have given birth to children with delayed motor development and dramatically lower intelligence.

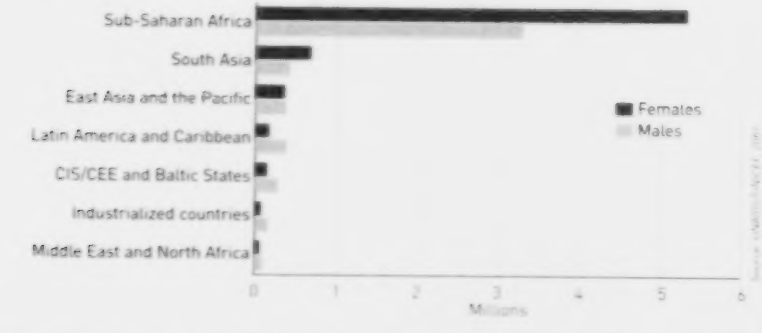
Yet women are often also at the forefront of the fights to conserve health and the environment. They have led the Chipko movement against the felling of forests in northern India and similarly are campaigning against chemical-intensive agriculture across the subcontinent. The soil in women's plots in Ghana has been found to retain its fertility longer than the soil in men's ones, while half of all the United Kingdom's organic farmers are female, ten times the proportion in the country's agriculture as a whole.

Geoffrey Lean

Estimated proportion of HIV-positive adults (aged 15-49) who are women, end 2003 (numbers are given on bars)



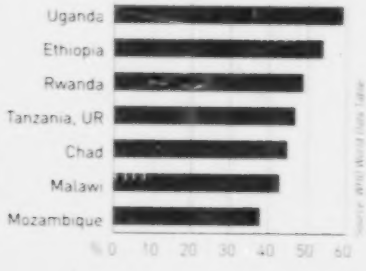
Young people (aged 15-24) living with HIV/AIDS, 2000



The greater an HIV/AIDS epidemic, and the more long lasting it is, the more feminized it becomes as heterosexual intercourse becomes the main method of transmission. Indeed women are more at risk than men. This is partly for biological reasons; they are the more likely to be infected during intercourse. Young women are particularly vulnerable. They tend to have sex earlier than young men, and with older partners, who may already be infected; one study in Zimbabwe, for example, found that nearly a quarter of women in their 20s were in relationships with men at least ten years older. They are also often even less able than older women to resist pressure for unsafe sex: many also experience rape and forced sex, which increases the danger of transmission even further.

Per cent of population who must travel more than half an hour to fetch water

Selected African countries, 2001 or latest available data



Women and girls often walk 15 kilometres a day, to and from water sources, spending eight hours or more a day collecting repeated loads weighing up to 20 kilos – the weight of an airline suitcase – a time. In India they spend 150 million work days a year on the task. Mothers and children are also the main victims of the poisonous cocktail of chemicals in smoke from woodburning stoves, which kills over 1.5 million people a year worldwide.

Deaths attributable to environmental causes, 2000

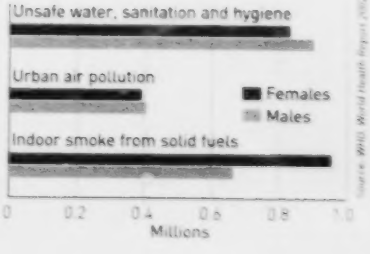


Photo courtesy Pritish Nandy Communications 'Shakti'

Aishwarya Rai

describes the spread of HIV/AIDS among women in her country and a unique attempt to tackle it

India is on the move, its economy growing rapidly. The gleaming buildings of its vibrant corporations scrape the sky in its burgeoning cities, while its universities turn out some of the best engineers and doctors in the world. Such signs of progress indicate India's efforts to overcome its development challenges. Although it struggles to educate the millions who cannot read and to provide better livelihoods for its citizens who have to survive on less than $1 per day, there is a powerful sense of energy as its people look to the future. My work as an actress has taken me across India and I have seen the challenges and felt the energy. But I have also seen a new and grave threat to the ability of my country to achieve its vast potential – the threat of HIV/AIDS.

At an AIDS support centre operated by Freedom Foundation, a private charity in Bangalore, the beautiful brown eyes of Rajni (not her actual name), a young Indian mother, look into a bleak future. Married at 14, she became a widow at 20 when her husband, who ran a small business, died of AIDS – and she tested positive for HIV. As she watches her 12-year-old son, also HIV-positive, play in the courtyard, she speaks sadly of her healthy nine-year-old daughter, given to her sister so that she does not have to bear the stigma of the disease. She speaks of a supportive extended family, but frowns as she describes how the cost of her husband's medical care forced her family to sell its home and condemned 24 relatives to poverty.

Action now

More than 5.1 million people in India are infected with HIV – 500,000 more than at the end of 2002. Indeed, the country now has the second highest number of cases in the world. The disease is already present in all 35 states and some experts expect as many as 15 million people could have the virus by the end of this decade unless decisive action is taken. By 2010, an estimated 2 million Indians will die of AIDS if nothing is done to stop the impending epidemic. Unless we act now, AIDS will ravage India as it has many countries in Africa, reducing life expectancies in some nations from 60 years to less than 40 and setting economic development back by decades.

Unfortunately, the widespread ignorance and stigma associated with AIDS hampers efforts to prevent the spread of the disease. Lack of education about its nature and causes leaves some people still believing that AIDS can be contracted from a mosquito bite or from shaking hands with an infected person, and others not realizing the dangers of indiscriminate and unprotected sexual activity. Much of the publicity about AIDS creates the impression that only marginalized elements of society – such as sex workers and drug abusers – are in danger from the disease: nothing could be further from the truth.

AIDS can affect everyone. It is spreading rapidly through India's general population in both rural and urban areas: they have some 60 per cent and 40 per cent of the infected population respectively. One third of HIV-positive people are women: more than 75 per cent of AIDS infections result from heterosexual intercourse, mostly between husband and wife.

The increase of AIDS in women – the 'feminization of AIDS' – is particularly tragic because their lack of power and security means that they can do little to protect themselves from infection by their husbands, who have usually contracted the disease through sexual activity outside marriage. Widespread ignorance results in women being infected without recognizing the danger. Their low status, and the stigma of AIDS, makes them afraid to go to medical practitioners for help, and their poverty often puts treatment out of reach. Rajni's eyes light up in anger as she speaks of other female clients at the centre who were forced to discontinue treatment, or had their drugs preempted, by their husbands or families.

Signs of hope

Population increase, illiteracy, lack of information, stigma and discrimination, poverty, migration, lack of openness about sex, and inadequate health expenditures are the main factors that fuel the AIDS epidemic in India. They promote denial and fear, perhaps the two greatest obstacles to overcoming the threat. But there are signs of hope. India's new prime minister, Dr Manmohan Singh, is calling for social reform to fight gender and class inequalities that promote the spread of AIDS. The government has initiated a surveillance system to test for HIV/AIDS at 450 sites across the country. Awareness levels are slowly rising as leaders across the political spectrum recognize the need to unite in their efforts to fight the disease.

Victory in the battle against AIDS will require an attack from all sides. Awareness campaigns can overcome denial. Advocacy efforts designed to promote better awareness of the causes of the disease – as well as of the fact that everybody is at risk – can reduce the stigma associated with it. The attack on AIDS cannot

be separated from the issues of poverty and human rights. Advocating safe sexual practices will have no effect unless the rights of women are strengthened and respected. Prevention strategies will have little effect, and there will be little incentive to report infection, unless there are links to treatment that provides hope to the afflicted. Treatment, in turn, cannot be separated from efforts to improve livelihoods, as anti-retroviral drugs can be harmful to an empty stomach.

India need not fight this battle alone, and it can certainly learn from successful efforts elsewhere in the world. Preventing an AIDS epidemic will require effective partnerships. In the Bellary district outside Bangalore, Karnataka, and in five other states, an example exists of partnership between these states, the central Government, the United Nations system and NGOs that has begun to reduce women's vulnerability by raising awareness of their reproductive health and rights. It also seeks to empower them to negotiate sexual relations and to increase their access to reproductive health services and information.

The CHARCA (Coordinated HIV/AIDS Response through Capacity Building and Awareness) initiative – jointly financed by the United Nations Foundation and the Government of the Netherlands – focuses on women and girls aged between 13 and 25. It will engage communities and empower women through community-based organizations such as Freedom Foundation in collaboration with female elected village officials.

Equality and justice

The CHARCA project is one of the first district-wide interventions for young women in the general population. It is working towards creating an environment that fosters equality and ensures justice for women and girls, seeking to equip them both to protect themselves against the virus and to realize their rights.

In spite of her condition, Rajni is hopeful. She is one of the fortunate ones with access to treatment. She is amazingly calm. Asked why, she says: 'I have faith in my country. We will find a way to address AIDS. If I am not saved, at least my daughter will not have to suffer as I have suffered.' We must keep faith with her and the millions of victims of the disease in India and worldwide and each do our part, however small, to make a difference ■

Aishwarya Rai, a former Miss World, has won many 'best actress' awards for her Bollywood roles and last year was the first Indian actor to be a member of the jury at the Cannes Film Festival. She is to star in Bride and Prejudice *opposite Martin Henderson and in* Chaos *with Meryl Streep.*

UNPRECEDENTED *opportunity*

MARINA SILVA describes her work, as her country's first woman environment minister, to implement sustainable development policies that promote social and environmental health

When I became Minister for the Environment last year, at the time that President Lula took office, I faced a major question. How to translate all my accumulated experience of environmental issues – in society, the academic world, parliament and at the various levels of government – into a policy that would embrace Brazil's socio-environmental challenges and be geared towards sustainable development?

The first aspect to consider – bearing in mind my academic training as a history teacher – concerned the historic relationship between environmentalism and social concerns. In 2003, we marked 30 years of environmental policies in Brazil, which had begun with the creation of the Special Secretariat for the Environment in 1973. This was a response to the first protests against industrial pollution in both urban and rural areas and led initially to a policy of command and control. Two years before, the environmentalist José Lutzenberger had launched a crusade against contamination by pesticides, which he evocatively called 'agripoisons'.

In 1981, a new law established a National Environment Policy and the National System for the Environment (Sisnama), in which municipal and state authorities and the federal government all took part. Four years later the National Council of Rubber Tappers proposed setting up 'extractive reserves' as an alternative to agrarian reform in the Amazon region. North American and European environmentalists were amazed that the forest peoples were fighting to conserve the habitat on which they depended for survival – putting an end to the myth that they posed a threat to the Amazonian ecosystem. This period also saw the rise of powerful social movements all over the country, leading in 1988 to the writing of a new chapter of the Federal Constitution devoted to environmental issues.

Environmental response

In 1989 the central government created Brazil's environment agency – the Brazilian Institute for the Environment and Natural Renewable Resources – as a response to progress in legislation and social organization amid the huge repercussions of the murder of Chico Mendes.

The 1990s witnessed the institutionalization of environmental issues in Brazil, boosted by the 1992 United Nations Conference on Environment and Development in Rio and by important new legislation, such as the Environmental Crimes Act and the National System of Conservation Units.

President Lula's election manifesto included the environmental programme Environment and Quality of Life. This is now being put into practice as a government programme and provides the basis for the definition of the Environment Ministry's objectives. The programme includes the principle of 'transversality', implementing an integrated environmental policy within the overall government policy. It also provides scope for the participation of civil society in controlling public policy, and for involving different levels of government (federal, state and municipal) in reinforcing Sisnama and consolidating the sustainable development agenda. It also confirms the Environment Ministry's role as the instigator of socio-environmental policies.

Greater participation

From the start, our government has had to face the challenge that social movements have been giving voice for over 20 years to the public desire for greater participation in environmental politics. We gave priority to strengthening existing organizations, and organized the first National Conference on the Environment, which involved 70,000 people. Meanwhile around 5 million young people, teachers and family members took part in preparations for a Junior Conference under the slogan 'Let's take care of Brazil and strengthen Sisnama'.

The government designated 826,000 hectares of land as conservation units, in response to the demand for protecting our biodiversity and using it sustainably. Amazonia was one of the targets of this integrated policy. Important measures were

Ricardo Beliel/UNEP/Topham

Nelson Lourenco/UNEP/Topham

Luiz C. Marigo/Still Pictures

taken to deal with deforestation, such as establishing a new kind of rural settlement, the Forest Settlements, and the plan to combat the deforestation of Amazonia on which 11 ministries collaborated.

The National Integration and Environment Ministries launched the Sustainable Amazon Plan to promote a paradigm shift in regional development policy: it includes measures for environmental management, sustainable production with innovation and competitiveness, social inclusion, providing infrastructure and new forms of financing. As a result the activities in the second phase of the Pilot Scheme for the Conservation of the Tropical Rainforests have the status of public policies for the Amazon region.

Integrated policy

In a further integrated policy initiative, we are working with the Ministry of Mines and Energy to implement a new management model for the electrical sector: its innovative strategies take account of the environmental dimension in planning investments.

The dilemma of how to reconcile environmental policy with economic development is gaining prominence in certain sectors of Brazilian society, especially the media and the infrastructure industry. Seldom has the issue of the environment attracted so much attention over the past 30 years. This could be a positive indicator of the relevance of the new environmental policy to the management of the economy. But it also represents a conflict between different points of view on introducing the environmental factor into development strategies. The proposals in Agenda 21 – especially the Brazilian version – and their adaptation to local conditions are particularly relevant to the debate. There is, thus, an unprecedented opportunity to create a new concept of progress that is socially just and environmentally sustainable, through public debate and government action.

We have an opportunity to create a new concept of progress that is socially just and environmentally sustainable

It is up to the government to demonstrate that concern about the use of the environment and natural resources is no obstacle to social and economic progress. Quite the contrary, it adds value. It is both an incentive and a benefit, it generates income and employment and is an opportunity for lasting, sustainable development. By contrast, over the last 40 years – since the 'developmentalism' of the 1960s and the 'Brazilian miracle' under the military government, associated with unbridled agricultural expansion – we have not managed to overcome enormous social inequality, nor to guarantee quality of life and intelligent use of natural resources, apart from in localized projects and initiatives.

One practical response offered by our government is the paving of the Cuiabá-Santarém highway, the subject of a long-standing regional dispute in which environmental restrictions have always been regarded as obstacles. Without the necessary precautions, projects of this nature can deepen social divisions and damage the environment – and even jeopardize economic objectives. But our project – which we have called the Sustainable Highway – results from a political process involving governments, the private sector and social organizations. It is centred around a plan that will bring sustainable development to the whole region affected by the construction work. The process will include creating conservation units, controlling land use, providing basic services to the population and promoting policies to encourage appropriate use of natural resources. It will serve as an example for future infrastructure projects, demonstrating that such construction work is not in itself the cause of insuperable environmental and social problems.

All this has been made possible by the fact that we are not starting from scratch, but operating in a favourable climate in which technical experts, environmentalists, political leaders and communities are all ready and willing to work together to achieve sustainability. We have an effective legal framework, the support of a forward-looking and committed business sector, and experience of engaging with controversy and negotiating at every level to reach our objectives.

New contributions

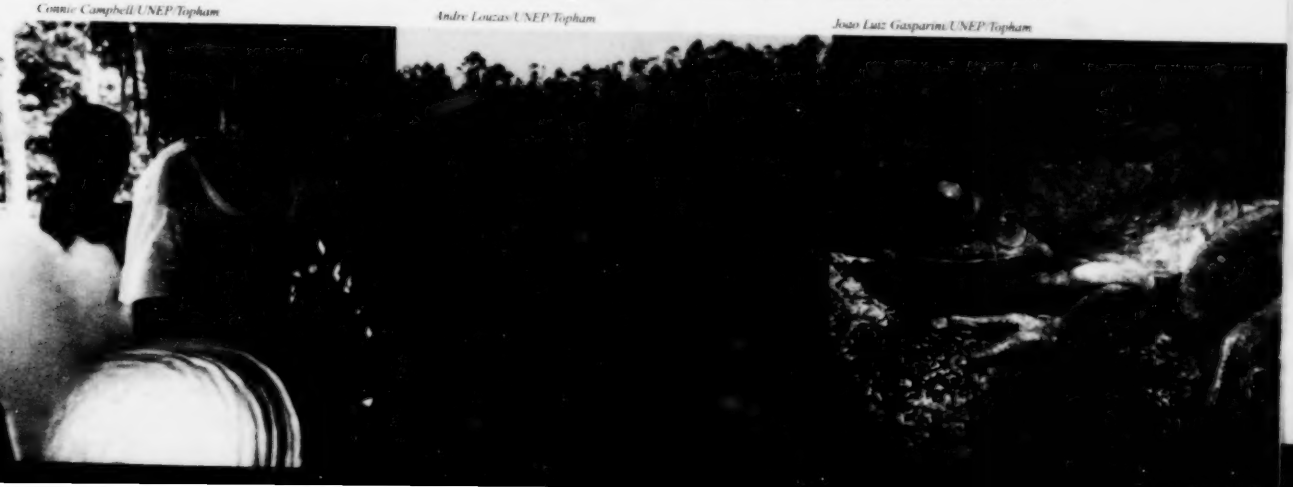
That is why – in this initial period in office – we are not presenting appraisals inspired by the standard question: 'What have we done?' We are posing a more complex and more far-reaching question: 'What new contributions are we making?' So far, I believe the government has taken the first steps towards public policies for a development agenda that takes full account of the socio-environmental dimension ■

Senator Marina Silva is a member of Brazil's Federal Senate and Minister for the Environment. She has won many international awards including a Goldman Environmental Prize and nomination as one of UNEP's '25 women leaders in action for the environment'.

Connie Campbell/UNEP/Topham

Andre Loucas/UNEP/Topham

João Luiz Gasparini/UNEP/Topham



BOOKS & PRODUCTS

UNEP (United Nations Environment Programme) International Photographic Competition on the Environment 2004-2005

UNEP has launched its fourth International Photographic Competition on the Environment in 19 cities around the globe. Again sponsored by Canon Inc., it is open to both professional and amateur photographers of all nationalities and ages, with Gold, Silver and Bronze prizes in General, Youth and Children's categories.

Klaus Toepfer, UNEP's Executive Director, said: 'The previous three competitions have proved highly successful, generating huge interest within the photographic world and significant public awareness of environmental issues globally.'

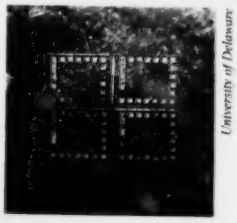
Fujio Mitarai, President and CEO of Canon Inc., said: 'Our corporate philosophy is *kyosei*, which means living and working together for the common good. In accordance with this philosophy, we believe that a harmonious coexistence with nature and the environment is essential for society to achieve sustainable development. I hope that the photographers participating in this competition, through the images they have captured, will be able to share the *kyosei* ideal with the world.' For details on how to enter see www.unep-photo.com ■

Natural Allies, a new **UNEP** publication, provides a clear picture of how civil society can and does work with UNEP, both benefiting from and strengthening its programme of work. Incorporating the advice of the many organizations that were consulted during a peer review process, it explains how civil society can interact directly with governments, whose decisions guide UNEP's work, and participate in UNEP activities. The publication is available to buy at www.earthprint.com ■

*The journal **Environmental Health Perspectives (EHP)** has been developing a broad international outreach programme to disseminate credible environmental health information throughout the world. It includes converting EHP to an open-access journal, providing complimentary print subscriptions to readers in developing countries, publishing a quarterly Chinese-language edition, participating in a **Fogarty International Center** initiative to partner with African medical journals, publishing a section in Spanish in the Chilean/Latin American journal **Ciencia & Trabajo,** and translating the **'In this issue'** section of the magazine into Chinese, French, Japanese, Russian and Spanish. See http://ehp.niehs.nih.gov/ ■*

Women are essential agents of change as the book ***Women and the Environment*** demonstrates. Produced by **UNEP** in partnership with the **Women's Environment and Development Organization (WEDO)** – with the financial support of the **United Nations Foundation** – it pays tribute to their essential contributions to environmental conservation and management. UNEP hopes that the book, which is available at www.unep.org, will inspire the environmental and sustainable development community to understand better the importance of gender and to integrate a gender perspective across all its work ■

Tessa and the Fishy Mystery is the first booklet in the **UNEP Tunza** children's environmental story series. It is a beautifully illustrated tale about a young girl living by the sea and confronting various environmental issues such as pollution, overfishing and mangrove deforestation. The booklet also has a 'facts and figures' section on seas and oceans. Priced at $6, it is available from www.earthprint.com ■



University of Delaware

Researchers at the University of Delaware in the United States have discovered how to make a new type of computer circuit board out of chicken feathers. Some 1.36 billion kilos of waste feathers are generated each year by the 8 billion broilers produced in the United States alone, posing a major disposal problem. But they have proved ideal for the boards, which **Richard Wool** – who developed the idea – says required material that was 'light, yet strong, with as much air involved as possible'. Electrons move twice as fast on the feather boards as on traditional ones, and they meet electronics industry standards ■

THE OPTIMIST

***The Optimist** is the enticing title of a new quarterly magazine launched by **Green Cross International** led by **Mikhail Gorbachev.** True to its title, it sets out to be visionary and forward looking, focusing on raising awareness of the wealth of solutions and innovations to be found within the rich cultural, historical, scientific and technical resources at humankind's disposal. See www.greencrossinternational.net ■*

If you have ever held a newborn baby, you will know what a powerful feeling that is. The very essence of existence seems to be concentrated in that one moment. A new life, so innocent, so frail and yet so trusting. We, the adults, are the ones who have to protect and guide this new person, and it is humbling to be entrusted with such a huge responsibility.

But the curious newcomer to this world has already been affected by our lifestyles, and will continue to be as he or she grows up. Artificial chemical substances – a product of modern times – are all around us and inevitably find their way into our bodies. Our babies receive their first dose when they are still in their mothers' wombs. More chemicals reach them through their mothers' milk and through sources of pollution in their environment and food. Children are more exposed than adults because of their size and diet, and are also more severely affected since their internal organs, neural and hormonal systems and brains are still developing.

There is simply no getting away from chemicals. The last time the number of chemical substances was recorded in the European Union, more than 20 years ago, there were over 100,000 of them. In the United States, 80,000 substances are registered for use. In both cases, only a fraction of all these chemicals have been properly examined for their effects on human health and the environment. There is very little information on the safest ways of using them. Even women living in remote parts of the world, such as Inuit women, have high levels of persistent and bioaccumulative substances in their breast milk. This is not because they have used the products containing these substances, but because the substances can travel long distances, harming health and destroying the environment as they go.

CHEMICAL inheritance

MARGOT WALLSTRÖM describes how mothers and their babies are at risk from a host of little-understood substances, and outlines steps to test and control them

Last year, I had my own blood tested. I was checked for 77 problematic substances: 28 of them were found. They included carcinogenic PCBs (polychlorinated biphenyls) – industrial chemicals that were previously used in electrical equipment to prevent it from catching fire – and the pesticide DDT, which was banned in the 1970s in Western countries after killing birds feeding on treated land. Doctors told me that my levels would have been higher if I had not breastfed my two sons, thus passing these substances on to them. Breastfeeding remains the best start we can give our children in life, but this discovery has strongly reinforced my conviction that substances that accumulate in our bodies and in the environment should be used under very strict control, if at all.

Now that PCBs and DDT have been banned in many countries, the levels recorded in breast milk and the environment have decreased. This shows that joint action against the risks of chemicals is effective, even though the improvement is a lot slower than we would wish. It is high time that the international community intensified its efforts to enhance chemical safety. During the 2002 World Summit on Sustainable Development in Johannesburg we pledged 'to achieve, by 2020, that chemicals are used and produced in ways that lead to the minimisation of significant adverse effects on human health and the environment'. ▶

Topfoto/Imageworks

Chemical substances can travel long distances, harming health and destroying the environment as they go

It is difficult to establish clear cause-and-effect correlations as we know so little about chemicals, and even less about the complex interactions that may be taking place between different substances. But we have noticed worrying trends that are believed to be partially linked to chemicals. Allergies, cancers and threats to reproductive health are on the rise in the EU. Recent statistics show that cancers have increased by 63 per cent in France over the last 20 years. Studies indicate that the sperm counts of young men in Europe have dropped over the last few decades, and that incidents of testicular cancer are increasing. It is estimated that one couple in seven has infertility problems. In animals, too, we have noted worrying signs of endocrine disruption, such as sex changes in molluscs that have been in contact with anti-fouling agents.

This list of health and environmental problems suspected of being linked to chemicals could be made much longer. As many of these effects are the insidious results of long-term exposure to a mix of chemicals, it is difficult to trace them back to the ones that have caused them, and to prove the links conclusively.

This is why the European Union is moving towards a new system for chemicals management – REACH, standing for Registration, Evaluation and Authorisation of Chemicals. REACH will require industry to test, assess and provide safety information on all substances produced in significant quantities. This essential information will have to be communicated to users further down the supply chain – like manufacturers who use chemicals in their own production processes – and be made publicly available. The use of hazardous chemicals – such as those that can cause cancers, mutations, or problems with reproduction, or those that accumulate in our bodies and in the environment – will require a specific

TOXIC trespass

SHARYLE PATTON describes how a chemical invasion of women's bodies threatens the rights they have so recently won

Unlike our great-grandmothers – who lived out their lives before the chemical revolution began to unfold in the mid-1950s – we have taken in hundreds of toxic substances. Many take up residence in our body fat, where they may remain for decades; others are absorbed into the body and quickly metabolized and excreted.

Biomonitoring provides a snapshot of these body burdens and constitutes ultimate proof of our exposure. The data it provides have profound implications for women everywhere.

The 1994 United Nations International Conference on Population and Development in Cairo and the United Nations Fourth World Conference on Women in Beijing the following year both upheld women's rights to enjoy the highest attainable standards of physical and mental health. These fundamental rights – including the right to security of the person, the right to bear a family and the right of all women to control all aspects of their health, particularly their own fertility – are being seriously compromised by exposure to toxic chemicals.

Winds and air currents can carry persistent chemicals thousands of miles. Snow on the Swiss Alps holds DDT used for malaria control in the tropics. Indigenous communities living near the Arctic Circle carry in their bodies high levels of polychlorinated biphenyls (PCBs) used primarily as flame retardants far to the south. Whether we live in Johannesburg or Juneau, Rome or Rio de Janeiro, we all carry a sampling of the chemical soup created by an industrializing world.

Chemical diaries

Women's bodies also carry chemicals found in products and processes they use or to which they are exposed. Have they grown food with chlorpyrifos or DDT? Do they live next to a polluting factory, incinerator or busy traffic

permit or may be prohibited. This will send a clear message to industry: look for, and develop, safer alternatives!

This proposed new legislation, which will now be discussed by the European Parliament and the Council of EU Ministers, has been a test case for the application of the sustainable development approach. While our primary goal has been to achieve a high level of protection for human health and the environment, we have made sure that the costs and bureaucracy for industry will be limited, meeting its needs for clear and transparent rules that stimulate innovation and growth. REACH thus strikes a balance between environmental, social and economic concerns – and it will help us meet the commitment we made in Johannesburg.

REACH is not a miracle cure that will eliminate the problematic substances that are already spread widely throughout the environment. But it can help us make sure that the risks of chemical substances are identified early enough to prevent many of the ill-effects that could arise from careless use. We need chemicals. They are an integral part of modern society, providing much of the comfort and convenience of everyday life. But they need to be handled and used in a safe way, and we have to get rid of those that pose unmanageable risks.

More than anyone else, newborn babies – and the children they later become – have a right to grow up in a healthy environment. But women and men too have a right to a safe environment, safe working conditions and safe products. It is in our hands to make tremendous progress towards safe chemicals management in the EU, and in so doing I am sure we shall set an example for other countries as well ■

Margot Wallström is European Commissioner for Environment.

intersection? Have they washed their children's hair with products containing lindane? Have they used a particular solvent in cleaning, or a particular cosmetic containing phthalates and other chemicals? The answers are documented in their bodies, which become chemical diaries of their lives.

Genetic expression is mediated by a panoply of hormones, neurotransmitters and growth factors. Our neurological, immune, reproductive and endocrine systems all function by using these chemical messengers to trigger biological events.

Many man-made chemicals resemble these naturally occurring substances. They may initiate a cascade of deleterious events when the body mistakenly accepts and uses them as part of its messaging system. Many of the chemicals now found in women's blood, urine, bone, breast milk, adipose tissue or other biospecimens can deliver such unintentional messages, potentially changing how the body's intricate and fragile systems function. Such chemical hijacking can occur at very low levels of exposure, previously considered below standard safety thresholds.

Mother to child

Many chemicals can pass through the placental barrier during pregnancy and disrupt the development of the fetus during critical times of growth and cell differentiation. The effects may not be evident until puberty or even later.

Traditionally, epidemiologists have focused on the effects of high levels of chemical exposure on small populations. Now a revolution in toxicological research tells us that we need to be concerned about low-level doses to large populations and that we need to consider the effects of chemicals in combinations which may interact in unsuspected and untested ways. It demands that we also need to consider specially vulnerable populations such as children (who, kilo for kilo, are more exposed to chemicals than adults), the elderly (whose bodies may be less capable of metabolizing and excreting some chemicals) and women (whose monthly flux of hormonal activity and ▸

Fundamental rights are being compromised by exposure to toxic chemicals

extra layer of epidermal fat may create particular vulnerability).

Thus classic regulatory toxicology is insufficient to guide public health standards, especially for women and their children, who worldwide are experiencing an increasing incidence of a number of diseases, including some cancers and developmental disabilities.

Breast cancer rates appear to be increasing in many regions, although mortality is declining or stabilizing in some countries. The linkage between breast cancer and chemical toxicants is unclear, but a number of studies indicate the need for precautionary action. It appears, for example, to be linked to lifetime exposure to oestrogen. The body recognizes many man-made chemicals as having oestrogenic properties, so exposure to them may be linked to breast cancer.

The ubiquitous dioxin is one such chemical. A new study has found that women exposed to high levels of one form of it after the 1976 industrial explosion in Seveso, Italy have an increased risk of breast cancer.

Infertility may also be increasing in many regions, though difficulties in data collection prevent a definitive analysis. The cause of approximately one third of all cases of infertility from the late teens to early 30s is unknown. Recent science indicates that toxic chemicals may play a role.

Wealth of evidence

Bisphenol A – used in polycarbamate and other plastics, the lining in tin cans, floorings, enamels and varnishes, adhesives, nail polish, compact discs, electric and electrical appliances – has been measured in the blood of pregnant women, in umbilical blood at birth and in placental tissue, at levels within the range shown to alter development.

Recent research on mice has associated it with aneuploidy, the chromosomal error that in humans causes many spontaneous miscarriages and birth defects, including Down's Syndrome. The mechanisms of cell division in mice are similar across a very broad range of living organisms, so the results are likely to be relevant to human health. Other studies indicate that exposure to the pesticide DDT also increases risks of premature birth and possibly miscarriage.

Meanwhile low sperm count and quality are associated with exposure to chemicals, including commonly used pesticides, such as alachlor, atrazine and diazinon.

Although the studies are not scientifically definitive, the weight of

We do not know the full impact chemical exposure may have on our health

evidence indicates that our rights to reproductive health and to bear children successfully may be threatened by exposure to a wide range of chemicals.

Our right to reach our highest potential, and to fulfil our human genetic legacy, is threatened by exposures in the womb to many chemicals – including PCBs and the plasticizer DEHP – which seem to alter how we think and behave. For example children born with higher levels of PCBs (but still within the range considered 'normal') to women living around the Great Lakes who consumed two or three meals of game fish a month in the years leading up to and during pregnancy were found to have smaller head circumferences, lower IQs, shorter attention spans and weaker reflexes.

Meanwhile Dutch scientists have reported that boys with higher PCB exposures are more likely to engage in feminine patterns of play, while similarly exposed girls are more likely to engage in masculine play; more feminized behaviour was found in both boys and girls prenatally exposed to higher levels of dioxin. The study parallels findings from animal studies.

Troubling implications

Such studies are troubling in their implications for women's physical and emotional health, and for the health of their families. Yet very few of the thousands of chemicals now in use – or being produced as unintentional byproducts of industrial processes – have been tested for their impacts on human health. So we do not know the full impact chemical exposure may have on our health and basic human rights.

Recent agreements – especially the Stockholm Convention which mandates phasing out 12 of the most damaging persistent organic pollutants and includes a mechanism for adding further chemicals for action, and the proposed EU REACH legislative initiative – are solid first steps to ensuring that women's rights will not continue to be threatened by toxic trespass. Women around the world need to become better informed about these threats to their – and their families' – health, so that they may become part of a process that will find safer alternatives, support pre-market testing of all chemicals and integrate the precautionary principle into chemicals management policies. This will protect women's health and the health of future generations. And it will also help maintain what we have struggled for in the past decade, the ability of all women to live to their fullest potential ■

Sharyle Patton is Director of the Health and Environment Program of Commonweal.

Jorge Luis UNFPA Peruana

First empower

ADRIENNE GERMAIN says that securing women's rights is the key to ensuring their health and to protecting the environment

Are women part of the problem or part of the solution? Ten years ago at the International Conference on Population and Development in Cairo, 179 countries agreed that – when it comes to families and health, education and development, population and the environment, in every country, whether rich or poor – women's health and rights are key to the solution.

Participants recognized that the world's most pressing challenges – poverty, ill health, ignorance, environmental destruction – could be solved only by addressing the needs and rights of every girl and woman, especially the disenfranchised, at the most personal level. They confirmed each individual's right to health, education and, yes, the ability to control her sexual and reproductive decisions.

These were not utopian notions, motivated by idealism, although idealism abounded. The underlying premise was that, by investing in each woman's education and health – step by step, woman by woman – her empowerment would enable her to make choices that would profoundly benefit her family, her community and her world. Her decisions and those of millions of others like her around the globe would lead to slower population growth, increased prosperity and less pressure on the environment.

Investing in women

In Cairo, countries rejected demographic targets as a strategy to slow population growth and aid economic development. They agreed that the best way to build families, communities and nations was by investing in women, including comprehensive reproductive health care, girls' education and environmental conservation. Participants from both rich and poor countries recognized the high cost of continuing to deny women's most basic human rights: a self-perpetuating cycle of poverty and the concomitant degradation of individuals, societies and the environment around them.

By empowering girls, the rest would follow.

Demographic dividend

The achievements of the latter half of the 20th century crucially informed the underpinnings of the consensus. Many economists credit the success of nations like Japan and the Asian Tigers to their declining birth rates, which created a so-called demographic dividend, allowing parents and societies to invest more in fewer children.

In Europe, the Americas, Africa and Asia, a similar pattern holds true: if a girl receives an education, she marries later and has fewer and healthier children. If she attends school even for four years, her child is twice as likely to survive as the child of an uneducated woman. On a national level, later childbirth and a reduction in child mortality often result in a decline in fertility rates, which translates to more resources for the next generation.

The conference at Cairo was a watershed event, recognizing the centrality of women and how – if this neglected half of the world's population were healthier and better educated, and their human rights were protected – they would make pivotal contributions to solving the world's ills. So, ten years later, what of the commitments made there?

Evidence continues to mount that such investments work, as countries have begun to put the precepts agreed at Cairo into practice. Between 1998 and 2001 Brazil reduced maternal deaths from 34.4 to 28.6 per 100,000 hospital admissions, through the ▶

efforts of the government and non-profit organizations. In Bangladesh, thanks to a coordinated government and civil society initiative, the percentage of women receiving antenatal care went from 26 to 47 per cent, female life expectancy increased from 58 to 60 years, and maternal mortality fell from 410 per 100,000 live births to 320, between 1998 and 2002.

Sadly, many examples over the past decades also illustrate how high population growth rates can erode quality of life and the environment, and hinder developmental progress.

Chirag Kan Singh / UNFPA/Upham

A decline in fertility rates translates to more resources for the next generation

While population growth has stabilized in the industrialized world, growth rates in parts of the developing world remain high. The average number of births for an African woman, for example, is 6, compared to the current global average of 2.7. Nearly half of the countries in Africa have population growth rates of around 3 per cent, and the continent's share of the world population is expected to almost double from 13 to 24 per cent by mid-century. At the same time more than 300 million Africans subsist on less than $1 a day. Per capita food production is declining, and the public health crisis, spurred by HIV/AIDS, is mounting. The demands of the increasing number of people on land, forests and water resources contribute to deforestation, land erosion, desertification and falling water tables. By some estimates, half of sub-Saharan Africa is suffering from degradation of arable land, undermining the livelihoods of a largely agricultural people.

Step by step

Similarly India's population is expected to increase 52 per cent to 1.6 billion by mid-century, when it will overtake China as the world's most populous nation. Meanwhile, in Rajasthan, high fertility rates and a devastating drought are forcing men to migrate to find work and women to bear 80 per cent of the agricultural burden while trying to secure adequate food, water and fuel for their children amid the scarcity. Migration has introduced the spectre of HIV/AIDS.

Yet despite these challenges, the news is far from all bad. For one thing, we know what to do, step by step, one woman, one girl, at a time: adhere to the actions agreed at Cairo.

Backing for the Cairo consensus continues to be strong. At regional meetings in the last two years in Asia, Latin America and Africa, countries have overwhelmingly reaffirmed their commitment to its plan of action, despite opposition by the US Administration and a handful of ultra-conservative voices.

This May the 57th World Health Assembly in Geneva adopted the World Health Organization (WHO)'s first strategy on reproductive health, based on the Cairo agreements. It recognized that reproductive and sexual ill health accounts for 20 per cent of the global burden of ill health for women, and 14 per cent for men. The new strategy lists five priorities: improving antenatal, delivery, postpartum and newborn care; providing high-quality services for family planning; eliminating unsafe abortion; combating reproductive tract and sexually transmitted infections, including HIV; and promoting sexual health.

The WHO strategy also highlights the concern of the world community about insufficient progress made in improving reproductive and sexual health in the past decade and commits the agency to helping mobilize more concerted political will and critically needed investment. Industrialized countries, in particular, have fallen far short of their commitments to family planning and reproductive health programmes. Industrialized countries that were expected to contribute one third of the total annually, or $6.1 billion by 2005, contributed only $3.1 billion last year.

Breaking the cycle

This lack of will is particularly worrisome for the poorest nations, their citizens and the environment that they live in. The world is now home to the largest ever generation of young people – some 1.2 billion aged between 10 and 19 – the vast majority of whom live in the developing world. The subcontinent and Africa, for example, are overwhelmingly young. In India 34 per cent of the population is 15 or younger. At least 45 per cent of the population in most African countries is under 15. If these young people do not receive adequate reproductive and sexual health care services and information, if girls do not have access to school or income-earning options, the cycle of high fertility and ill health, poverty and environmental pressures will continue.

Population issues encompass the world's largest problems, but their solutions involve the most personal decisions, beliefs and behaviour. Ten years ago we recognized that each woman and each girl is important in her own right and, given the opportunity, holds the key to better health and a better life for herself, her family and her world. We will overcome the challenges of poverty, ill health and environmental pressures only by committing resources – and not just making agreements – that put the needs, desires and rights of individual women and girls at the centre of global health and developmental policies ■

Adrienne Germain is President of the International Women's Health Coalition.

Citizen engagement

LOIS ABRAHAM and **JANE ROBERTS** describe how ordinary Americans have flocked to back United Nations activities on population and development

UNFPA/Topham

As American citizens, we are proud of the role the United States has historically played on the issues surrounding population and development.

John D. Rockefeller III was a key leader in the field and helped galvanize US and global action in the 1960s. Our then Ambassador to the United Nations, George H. W. Bush, was present at the creation of the United Nations Population Fund (UNFPA) and had nothing but wonderful things to say about its early efforts. For 30 years, population-related assistance has been an important part of US foreign assistance. We were also proud of the leadership provided by the US Government at the International Conference on Population and Development (ICPD) in 1994 and encouraged when US funding for population reached an all-time high of $585 million in 1995. Follow-up to ICPD from US foundations has been encouraging as well.

President George W. Bush was elected as a unifier and compassionate conservative. On population issues, the early steps were encouraging as funding was provided to UNFPA. Secretary of State Colin Powell testified favourably about the organization's work and supplementary funding was requested to support emergency efforts by UNFPA in Afghanistan. Late in 2001, a budget deal was reached between Congress and the President that included funding for UNFPA. But in July 2002 funding for UNFPA was cut off.

Amit Roy/UNFPA/Topham

UNFPA/Topham

Citizens have a responsibility to speak out for global cooperation

Sending a signal

Independently, we were concerned that this should have happened at a time when our nation was crying out for global unity and international cooperation in the aftermath of the terrorist attacks on 11 September 2001. Lois began contacting friends on e-mail, asking them to send at least $1 to help continue UNFPA's work and send a signal from the people of the United States that we care about women's lives. Jane wrote to the local newspaper with a similar sentiment and a call to send $1 and a message. Soon a website was started at www.34millionfriends.org.

Before long, a trickle of envelopes turned into a flood and the 34 Million Friends of UNFPA effort was launched. To date, more than 100,000 Americans have responded and $2 million has been raised: it has given ordinary citizens an opportunity to express their support for the world's women and their concern about an important US policy.

Global good

In a larger sense, 34 Million Friends of UNFPA is indicative of the growing power of citizen efforts in an information age that daily draws people and countries closer and closer together. Citizens have an opportunity – and responsibility – to speak out about the necessity of global cooperation on behalf of the future of our planet and its people. On the tenth anniversary of the historic agreement in Cairo, we hope that our grassroots efforts will serve as an example for citizen action around the world on behalf of women's health, the environment and other common causes that serve the global good ■

Lois Abraham, an attorney, and Jane Roberts, a retired schoolteacher, are co-founders of 34 Million Friends of UNFPA.

Lydia Images

ADDING *feminine* PERSPECTIVE

BEVERLY MILLER describes UNEP's work to integrate gender issues into environment and development programmes

In Jamaica, the umbilical cord is planted together with a seedling as soon as it falls off the newborn child. This has a far-reaching psychological impact. My tree (a coconut) was made known to me as a child and I always felt that I would grow as tall and as impressive as the coconut trees around. The experience made me aware that environmental values should be taught as part of one's culture.

My roots in the hills of central Clarendon, Jamaica gave me both a sense of security and confidence and a love of natural beauty as I grew up, and played a significant role in shaping my career path, stimulating me to obtain a Masters of Engineering Degree in Environmental Engineering. I decided to become part of the environment movement, first working for the Government of Jamaica (assisting with establishing the department responsible for the environment) and then joining the United Nations Environment Programme (UNEP).

As a woman and mother, my thought process and decisions are influenced by my gender and life experiences. This featured in my drafting of government water and air pollution control standards, i.e. in considering the nature and type of clothing required for a female to climb a 60-metre smoke stack, the weight of the sampling equipment, the time required for results to be known and, most importantly, the negative impacts of air and water pollution on human health.

My experience made me aware that environmental values should be taught as part of one's culture

UNEP has appointed a gender focal point at the policy level with the responsibility of spearheading the UN gender mainstreaming policies. It also monitors the implementation of UNEP Governing Council decisions on the role of women in environment and development, to ensure the equal and beneficial integration of women in all environment management activities. In 2000, a gender mainstreaming strategy was developed to create a structure to implement the policies and activities of the UN gender mainstreaming policies. It was developed with a view to improving the institutional governance, programme and managerial processes of UNEP.

UNEP pursues a process to ensure the incorporation of the gender perspective in formulating programme plans and budgets. All UNEP projects adhere to the UNEP Manual on Project Formulation, Approval, Monitoring and Evaluation, which contains a chapter on gender sensitivity guidelines. The guidelines place emphasis on gender considerations in project documents and identify the steps for including gender in UNEP's relationship with collaborating and supporting organizations. They are supplemented by practical recommendations on gender planning to facilitate the participation of women and other major groups.

The project manual also emphasizes that gender planning recognizes that women and men play different roles in society, and often have different needs. Therefore, an understanding of gender roles, responses and needs must be part of initial planning activities.

Mainstreaming gender

UNEP also endeavours to ensure gender balance during meetings and workshops and strives to mainstream gender issues in all programmatic activities. A global database of gender and environment focal points – not just of governments, but of relevant global non-governmental organizations and relevant civil society entities – serves as an information exchange and data collection tool and provides the information required for capacity building at the national, regional and global levels.

UNEP's 2004-2005 Programme of Work reflects gender as a cross-cutting priority in all its activities. It specifies:

- integrating gender mainstreaming policies, and promoting active participation of women in environmental protection and sustainable development efforts within the Division of Policy Development and Law and the Division of Early Warning and Assessment
- providing technical assistance to women's networks for developing and implementing projects to carry through the outcomes of the 2002 Johannesburg Earth Summit
- focusing on women in regard to reports addressing the causes of ill health, including environmental causes, and their impact on development
- developing education and training materials based on best practices and success stories for women stakeholders.

At the eighth special session of the UNEP Governing Council/Global Ministerial Environment Forum, last March, UNEP and the Network of Women Ministers of the Environment organized a special event on women and water to support national and multilateral strategies for improving the situation and role of women in water and sanitation management. It provided useful experience in preparing for a follow-up to the 1995 Beijing UN Fourth World Conference on Women at next year's Governing Council.

The gender perspective must be both explicit and more visible in the achievement of sustainable development. Understanding, as we must, that environment is one of the pillars of sustainable development, we must renew our efforts to include the voice of women in the international environment governance debate that is needed now more than at any other time in history.

Enhancing participation

UNEP recognizes the need to intensify gender-focused capacity building in environment and development. Increased focus on implementation, targets and impacts in the field of gender and environment is necessary for the advancement of women in development. Dialogue between UNEP, governments and civil society organizations must continue to offer new avenues to enhance their participation in decision making. Integrating rural women's traditional knowledge and practices of sustainable resource use in developing environmental management programmes is crucial.

All the Millennium Development Goals are linked to women and their situation, and gender perspective should be mainstreamed into planning and all other development processes – nationally, regionally and globally. During the Women's Consultative Seminar held in February 2004 at UNEP headquarters, a working group addressed the goals from a gender perspective and recommended 'that a review of the implementation of gender and environment commitments made in the United Nations Fourth World Conference on Women in Beijing and in relation to the Millennium Development Goals should be carried out, including best and worst practices'.

The gender perspective must be both explicit and more visible in the achievement of sustainable development

How can I end without a parting plea – that we put our money where our mouth is in including the feminine perspective in the development agenda at all levels ■

Beverly Miller is Secretary of the Governing Council of UNEP.

Xing Guangchong/UNEP/Topham

UNEP/Topham

Peter Yutsches/UNEP/Topham

Ana Lorena Guillén Núñez

After all, 'nature' is female...

Nature – the very essence of all the entities that make up the universe – has created, managed, distributed and even regenerated all the ecosystems in the biosphere. It guides the adaptation of species when these are subjected to natural environmental change and even when they suffer serious damage through artificial change resulting from human exploitation.

During this evolutionary process, the world has witnessed countless numbers of peoples, tribes, ethnic groups, cultures and empires. Some were governed by matriarchies, with groups of women in many communities assuming enormous responsibilities – taking charge of seeing to their people's survival, finding ways of providing them with food and drink, helping them to grow and develop, caring for the sick and coping when faced with epidemics: women, in short, who have taken on the responsibility of guiding people's development, whatever the costs.

There is much talk about the interaction between 'man' and 'nature', evidently referring to the relationship between humanity and the environment; but it is important to make a distinction regarding the fundamental role played by women – the use, management, exploitation, administration and, of course, the care, of natural resources.

Women's work

Just as nature itself is in charge of management, distribution and problem solving, so women daily face the need to manage, distribute and solve whatever comes their way in the home to ensure the welfare of their families.

Visualize a woman with a small daughter, walking in the sunshine, carrying two heavy containers, with an anxious expression on her face. The girl – already a woman destined for work – is starting to copy her mother's tasks. When they get home they will have to ration the precious liquid to satisfy the needs of all the household. I close my eyes and see a woman harvesting, another serving up food she has been preparing, and another caring for the sick. I open my eyes, I see my country (no need to look further for the realities are similar on every continent, especially where poverty, epidemics and hunger are part of everyday life). There are the women, caring for their families' health, worrying about how to provide sufficient food and well aware of the difficulties in providing it. This is where education must begin to give real value to each of the things we use or consume.

Protecting resources

Women conceive life, and must know that their daily actions profoundly affect their natural, social, economic and cultural environment: who if not they are in charge of managing water, energy and food at the most basic level? Women must be the main promoters of the protection of our resources – whether in the big cities of industrialized countries or the most marginalized communities. Day by day they face the high cost of food and medicines due to the scarcity of resources, together with bad quality water and diseases brought about by lack of sanitation. They experience today's dire environmental situation and directly suffer its consequences. That is the very reason why they have often inspired a spirit of leadership, activism and action to find a solution to the problems.

It is time to [illegible] value of women's participation in environmental matters and in implementing sustainable [illegible] – this is a responsibility that must be shared and assumed equally by women and

[illegible] the National Autonomous University of Mexico, National Commission [illegible] Law of the Environmental Network of Mexico